

# **METALWORKING**

### **Equator 500**



# Maintain accuracy on the shop floor with the Equator 500!

- Instant automated feedback
- Updated tool offsets after tool/insert change
- Control of tool wear
- Process monitoring
- Validates process outcomes
- Reduces time delays compared to traditional or off-line measurement

The NEW Equator 500 system now enables the gauging of larger parts, with a working volume of 500mm in diameter and up to 400mm in height.

# **RENISHAW**

#### apply innovation™

#### **Features**

- Gauging system accurate between a range of 5°C and 50°C at any rate of temperature change
- Capable of scanning speeds in excess of 200 mm/s
- Gauging volume of 500 mm in diameter in the X/Y plane and 250 mm in the Z
- Able to switch between multiple parts: simple and complex measurements on a single device
- Instant automated feedback, process monitoring, and point of manufacture measurement (reduced time delays compared to traditional offline measurement)

### **POWER TAPS**



Whether cast iron, drawn aluminium or aluminium wrought alloys, stainless and acid resistant steels, high-tensile or general steels – Guhring's PowerTap series promises powerful taps for the most popular threads in most materials.

The special geometry of Guhring's PowerTaps makes them genuine all-rounders and enables outstanding machining results in a broad application spectrum. Thanks to an optimal cutting edge geometry a long and constant tool life is achieved.

The straight-fluted taps for through holes as well as the spiral tools for blind holes achieve optimal machining results thanks to high-precision cutting edge geometries.





# DOOSAN

### **DVF 5000 – 5-Axis Simultaneous Vertical Machining**







The DVF 5000 is designed to machine complex work pieces with high precision and speed. The 18,000 RPM built-in spindle gives superior performance in virtually any machining application. The travelling column machine structure provides uniform load to all linear machine axes allowing for a highly rigid and stable platform for your most demanding machining processes.

| Specs                          | DVF 5000  |  |  |
|--------------------------------|---|--|--|
| X/Y/Z Axis Travel (mm[inches]) | 625 [24.6], 450 [17.71], 400 [15.74]                        |  |  |
| B/C Axis                       | $B - 100 \text{ deg}\- 30 \text{ deg}; C - 360 \text{ deg}$ |  |  |
| Table Diameter                 | 500 [19.68]   |  |  |
| Spindle Nose to Table Top      | 150 mm to 5500 mm [5.9 to 21.65]                            |  |  |
| Spindle Speed                  | 18,000 RPM  |  |  |
| Motor                          | 24.8/29.5 HP  |  |  |
| Number of Tools                | 60  |  |  |
| Cutting Feed Rate              | 1 – 20,000 mm/mm [.04 – 787 ipm]                            |  |  |

### PUMA 4100/5100

# Puma 4100 - Medium to Large with 2-axis to milling machining capability



Puma 5100 - Medium to Large with 2-axis to Y-axis machining capability



Puma turning centers are designed for heavy and interrupted cutting, long-term high accuracy and superior surface finishes. The oversized spindle bore and draw tube can accommodate bars up to 4.0" in diameter. High speed turret indexing and fast rapid traverse rates minimize non-cutting time. Mill-drill capability reduces the need for secondary machining on other machines. It also helps to eliminate additional machine set-ups and handling costs. Classic manufacturing methods and ultra-rigid construction are combined with advanced technological features to provide exceptional value.

#### **Standard Features**

- Powerful high-torque spindle drive
- Large bar capacity
- High speed 1,500 RPM to 2,000 RPM spindle
- Programmable high/low chucking pressure
- Fast 0.25 second turret indexing
- One-piece torque-tube slant bed
- Isolated 2-speed gearbox

- Fluroplastic anti-friction mating way surface
- FANUC 0i-T control with swiveling operator's panel
- Automated metered lubrication system
- Arbitrary speed threading function

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# DOOSAN

### **DBC SERIES**



Designed for **high speed cutting**, long term high accuracy, and superior surface finishes. The high speed spindle and heavy workload capacity makes it an **ideal platform for machining larger pieces**.

Classic manufacturing methods and ultra-rigid construction are combined with advanced technological features to provide exceptional value.

#### Large with 2-axis to milling machining capability



| Spec                           | DBC 250II                                       | DBC 160  | DBC 130S                                     | DBC 130 L II                                   | DBC 130 II                                     | DBC 110S                                     | DBC 110 II                                 |
|--------------------------------|---|--|--|--|--|--|--|
| X/Y/Z/W Travel<br>mm (inches)  | 3000/2000/ 1600/500<br>(118.1/78.7/ 63.0/19.68) | 4,000/2500/ 1600/800<br>(157.48"/98.42"/63.0"/31.5") | 2000/1500/ 1200/600<br>(78.7/59/ 47.2/23.62) | 4000/2500/ 2000/700<br>(157.5/98.4/ 78.7/27.6) | 3000/2000/ 1600/700<br>(118.1/78.7/ 63.0/27.6) | 2000/1500/ 1200/500<br>(78.7/59/ 47.2/19.68) | 2500/2000/ 1500/550<br>(984/78.7/ 59/21.6) |
| Table Size                     | 1,600 mm x 1,800 mm<br>(63" x 70.8")            | 2000 mm x 2200 mm<br>(78.74" x 86.61")               | 1400 x 1600<br>(55.1 x 63)                   | 1600 x 1800<br>(63 x 70.8)                     | 1600 mm x 1800<br>(63 x 70.8)                  | 1400 x 1600<br>(55.1 x 63)                   | 1400 x 1800<br>(55.1 x 70.8)               |
| Spindle Center<br>to Table Top | 770 mm to 2,370 mm (30.3" to 93.3")             | 0mm to 2500 mm<br>(0" to 96.45")                     | 0 mm to 1500 mm<br>(0 to 59")                | 0 mm to 2500 mm<br>(27.6 to 106.3)             | 0 mm to 2000mm<br>(0 to 78.7)                  | 0 mm to 1500 mm<br>(0 to 59.1)               | Omm to 2000 mm<br>(0 to 78.7)              |
| Spindle Speed                  | 6,000 RPM                                       | 2000 RPM   | 2500 RPM                                     | 2500 RPM                                       | 2500 RPM                                       | 3000 RPM                                     | 4000 RPM                                   |
| Spindle Motor                  | 30/40 HP  | 49/60 HP   | 40/50 HP                                     | 49/60 HP                                       | 49/60 HP                                       | 30/35 HP                                     | 30/40 HP                                   |
| # of Tools                     | 60/90   | 60/90  | 60   | 60/90  | 60/90  | 40/60  | 60/90                                      |
| Cutting Feed<br>Rate           | 1 – 4,000 mm/min<br>(.04 – 157 ipm)             | 1 – 4000 mm/min<br>(.04 – 157 ipm)                   | 2 – 6000 mm/min<br>(.08 – 236 ipm)           | 1 – 4000 mm/min<br>(.04 – 158 ipm)             | 1 – 4000 mm/min<br>(.04 – 157 ipm)             | 2 – 6000 mm/min<br>(.08 – 236 ipm)           | 2 – 6000 mm/min<br>(.08 – 236 ipm)         |

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#### **NHP 4000**



# NHP 4000: High-Speed, High Performance Horizontal Machining Center

| Specs                     |  |
|---------------------------|--|
| X/Y/Z Travel:             |  |
| 22.0"/25.2"/26.0"         |  |
| Table Size: 15.7"x15.7"   |  |
| Spindle Speed: 15,000 RPM |  |
| 60 Tool Storage           |  |
| 40 Hp Motor               |  |
| CAT40 Big Plus Spindle    |  |

#### **Additional Features:**

- 3-Point support bed structure provides stable stiffness
- Standard high-speed built-in spindle improves noise, vibration, productivity, working environment and machining accuracy
- Minimize tool change error with tool check analog sensor

**Short on Space?** The DNM 4000 will fit right in with it's compact footprint of only 112.5" x 65"

### **Puma SMX3100ST**



The Puma SMX3100ST multi-task milling/turning centers are designed for heavy and interrupted cutting, long-term high accuracy, and superior surface finishes. The high-speed tool change with rapid traverse rate minimizes non-cutting time, while the c-axis contouring, y-axis off-center, and b-axis any-angle milling/drilling allow for single set-up completion of complex work pieces. Multi-tasking capabilities increase productivity and provide for just-in-time production requirements.

| Specs                       | SMX3100ST                     |
|-----------------------------|-------------------------------|
| Swing over Bed              | 660 mm (25.98")               |
| Max. Bar Capacity           | 102 mm (4.0")                 |
| Max. Turning Diameter       | 660 mm (25.98")               |
| Max. Turning Length         | 1,540 mm (60.63")             |
| Left Spindle Speed          | 3,000 RPM                     |
| Left Spindle Bore Diameter  | 115 mm (4.52")                |
| Left AC Spindle Motor       | 30 kW (40 hp)                 |
| Right Spindle Speed         | 40 – 4,000 RPM                |
| Right Spindle Bore Diameter | 91 mm (3.58")                 |
| Right AC Spindle Motor      | 26 kW (35 hp)                 |
| Milling Spindle Speed       | 12,000 RPM                    |
| Milling Motor Power         | 26 kW (35 HP)                 |
| Max. Number of Tools        | 80 (40 standard/120 optional) |



# **The Every Shop Machine!**

- Broad machining capabilities from high-speed, high-efficiency machining to heavy-duty machining all within a compact size.
- The next generation CNC-C00 control unit greatly improves processing capabilities and functions while enhancing useability.

| Specs               | S500                         |
|---------------------|------------------------------|
| X/Y/Z Travel        | 19.7" / 15.7" / 11.8"        |
| Spindle Speed (RPM) | 10,000/16,000/27,000         |
| Tapping Speed (RPM) | 6,000/8,000                  |
| Cutting Feedrate    | XYZ: 1~30,000 (0.04 ~ 1,181) |
| Tool to Tool Time   | 0.8 seconds                  |
| Chip to Chip Time   | 1.4 seconds                  |
| Max. tool length    | 9.8"                         |
| Max. tool diameter  | 4.3"                         |









### **COROCUT QD**



#### **Grades and Geometries for Parting Off**

Geometries designed for good chip formation, high stability and coolant access in combination with grades that provide excellent edge-line security in all materials make for inserts that excel in every parting-off operation.

#### **Y-axis Parting**

CoroCut QD for Y-axis parting, is designed with the insert pocket rotated 90 degrees, providing more than six times higher blade stiffness in turning centers and multi-task machines with Y-axis.

# The most reliable system for parting off.

#### **High Precision Coolant**

Over- and under- coolant system cools the cutting zone for better chip control, extended tool life and higher cutting data. Provides easy coolant connection with plug-and-play adapters.

#### **Additional Features:**

- Made of a strong material alloy with high fatigue resistance, the blades are optimized for reliable parting off and deep grooving.
   Reinforced parting blades are also available – perfect when working with long overhangs.
- Stable, user-friendly clamping with a railed insert seat for a precise insert position and quick-release key that eliminates the need for a torque wrench.
- Flexible tool options parting blades, shanks, and QS shanks for sliding head machines, as well as CoroTurn SL blades for modular machining

### **COROCUT QF**

#### **Innovative Blade Design**

More material in the weakest cross-section and decreased mass in the front part of the blade provides higher dynamic stiffness, effectively reducing vibration. The slit is optimized to provide the correct clamping force.

#### **Insert Design Optimized for Stable Face Grooving**

Tilted insert with stabilizing rails at the top, bottom and back of the insert to minimize insert movement.

#### **Precision Coolant Supply**

Improves chip evacuation and decreases the risk of chip jamming, critical factors for successful deep face grooving operations. Effective from low to high coolant pressures.

#### **Additional Features**

- Cutting heads for face grooving: modular, extremely robust serration lock interface/ axial mounting for increased stability and rigidity
- Coromant Capto directly integrated into the spindle
  - increases stability and versatility when face grooving
- High torque transmission and high bending strength
- Inserts designed for clockwise (QFT) and counterclockwise (QFU) spindle rotation





### **CORODRILL DS20**





#### Strong and fatigue-resistant drill body

Individually optimized and never-before-seen stiffness to ensure high process security, repeatability, consistent quality, and good run-out accuracy.

#### **Optimized insert design**

The robust insert seats have three support contact surfaces for less insert movement. The inserts are strong and have a bulk strength that provides extra toughness, resulting in **unmatched insert tool life**. Ground peripheral insert allows for closer hole tolerance, predictability, and consistent performance.

#### **Additional Features**

- Secure and reliable cutting process
- Versatile drill with optimized chip control and chip evacuation in a broad cutting data range
- Reduced sound level and reduced cost per hole
- Four true cutting edges on both peripheral and central inserts

### **Branch Locations**

#### **Calgary**

44-8009 57 Street SE 403.203.0289

#### **Edmonton**

5431 99th Street NW 780.435.3737

#### Regina

841 Roulston Street 306.721.6442

#### Saskatoon

B-3069 Faithful Avenue 306.653,7788

#### Winnipeg

169 Omands Creek Blvd 204.632.4092

